

# ATOMIC ENERGY *newsletter*®

A SERVICE FOR INDUSTRY BUSINESS ENGINEERING AND RESEARCH  
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Dear Sir:

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Multi-million dollar experimental device, with which it is hoped fusion reactions may be attained, will be built by the USAEC at Princeton University. As explained in Washington last fortnight by USAEC Chairman Lewis L. Strauss, the Stellarator, as the device is called, will enable an ionized gas to be confined in a magnetic field and to be heated to temperatures of millions of degrees for sufficient time for fusion reactions to take place. Completion is planned by 1961, at the latest. Mr. Strauss also noted that there are 500 persons, including 250 scientists, currently doing basic research on Project Sherwood, whose ultimate aim is industrial power from fusion reactions. (Mr. Strauss discounted possibility of fusion energy replacing fission as a source of nuclear power in the near future. He said he thought every dollar now being invested in fission power plants will be fully amortized long before controlled fusion is found to be either economic or feasible.)

New company, C. W. Reed Co., Inc., will handle a wide line of nuclear products and offer sales and service representation on the West Coast area for technical equipment manufacturers. The firm was established by Clifton W. Reed, co-founder of Reed-Curtis Nuclear Industries, Inc., and its president and technical director for the past seven years until he resigned last February. Located at 5959 So. Hoover St., Los Angeles 44, the company invites interested manufacturers to discuss West Coast business potential. (Other MANUFACTURERS' NEWS, p. 3 this LETTER.)

Inter-American Symposium on Peaceful Applications of Nuclear Energy, scheduled for May 13-17, 1957, at Brookhaven National Laboratory, Upton, L.I., will have some 100 participants from the U. S. and South America. Sponsorship is by USAEC, U. S. State Department and International Cooperation Administration. General sessions will be followed by parallel sessions for areas of special interest, and will cover applications of nuclear energy and by-products in industry, medicine, agriculture, biology, metallurgy, etc. (Other MEETINGS, COURSES, SYMPOSIA, p. 4 this LETTER.)

Contract for design, development and fabrication of nuclear reactor and components of the propulsion plant for the first nuclear powered merchant ship has been awarded Babcock & Wilcox Co., New York, by USAEC. Under this \$9,872,000 contract, B&W will supply pressurized water reactor of an advanced type capable of continuous output of 20,000 shaft HP. Using stainless steel clad uranium fuel elements enriched in uranium-235 to 2.9%, the reactor will power both the ship's propulsion machinery and its auxiliaries such as electrical generating plants, heating system, and cargo handling equipment. (Other apparatus and gear will be contracted for by the USAEC at a later date.) (Other CONTRACTS AWARDED, BIDS ASKED, p. 4 this LETTER.)

Facility to produce nuclear fuel elements for research and power reactors is to be built at Hicksville, N.Y., by Sylvania-Corning Nuclear Corp., according to Lee L. Davenport, president of the newly-organized company. To be a 25,000-sq. ft. plant, site will be a 3-acre plot adjacent the present atomic fuel element pilot plant established there by the atomic energy division of Sylvania Electric Products. (Other BUSINESS NEWS, p. 3 this LETTER.)

ATOMIC ENERGY FINANCIAL NEWS...

INVESTMENT COMPANIES ACTIVE IN NUCLEAR SHARES:- Uranium mining and processing properties comprised 41%, totalling \$44.5 million, of total gross assets of \$109 million of Atlas Corp., on Dec. 31, 1956, according to Floyd Odum, president, in the firm's annual report, released last fortnight. Atlas, large closed-end investment company, had assets of \$9.60 a common share at year end, up from \$9.50 on June 30, 1956. The Delta mine, Atlas Corp.'s first big venture into uranium mining, bought from prospector Vernon Pick in August, 1954, for \$9 million has been written down on the books to \$160,000, the report showed, and operations will cease there this June. In two years of operations, the mine will have shipped 100,000 tons of ore for gross receipts of about \$2 million. Depletion allowances and losses of the Delta venture offset profits from other operations of Hidden Splendor Mining Co., the Atlas subsidiary controlling Delta. Despite the Delta mine write-down, Atlas carried Hidden Splendor at \$26 million on its year end statement, and estimated total reserves it owns or controls to have a gross value of more than \$35 million, and net value of \$29 million. Other major uranium property of Atlas, in which it has a 73% stock interest, Lisbon Uranium Corp., is carried at \$15,553,000 with assets and capitalized expenses listed at \$5,306,553.

Net asset value per share of Energy Fund increased 13.2% in the fiscal half-year ended Mar. 31, 1957. This was a new high for the almost three years of operations of this open-end investment company, which is managed and distributed by Ralph E. Samuel & Co., New York. Total net assets on Mar. 31, 1957 were up 33.1% to \$3,433,790 from \$2,579,156 six months previous. The Fund, which invests in shares of firms in the energy industries, including the nuclear, added in first three months of 1957 commitments in Nuclear Development Corp. of America (1000 common at \$12.50 per share and \$12,500 in the firm's debentures); in Home Oil "B"; in Texas Instruments; in Philadelphia Reading; and in Minneapolis Honeywell. Eliminated were 2000 American Natural Gas.

Atomic Development Mutual Fund, Inc., Washington, has sold all its common stock in Can-Met Explorations, Ltd., (285,000 shares) at a profit to the Fund of about 50% above cost of acquisition, according to Newton I. Steers, Jr., president. Fund still holds \$135,000 of Can-Met bonds. Despite this sale, Fund still maintains substantially unchanged position in shares of such Canadian uranium operations as Consolidated Denison, Algom Uranium, Pronto Uranium, Preston East Dome, and Peach Uranium.

ATOMIC ENERGY DIVISION NOT PROFITABLE, FIRM REPORTS:- Loss of \$2.4 million occurred in its atomic energy division in 1956, annual meeting of Babcock & Wilcox Co. was told last fortnight in New York by its president, Alfred Iddles. Loss is justified by expectation of future profits, he observed. Heavy initial expenditures and high engineering and other costs in connection with B&W's nuclear projects will continue, Mr. Iddles said. (When the nuclear activities of B&W will become profitable cannot be predicted, Mr. Iddles stated: this LETTER Mar. 19, 1957, p. 5). In a breakdown of last year's shipments, Mr. Iddles said atomic energy products accounted for only 0.5% of the firm's business, with steam generating equipment accounting for 56%, tubular products 40%, and refractories 3.2%.

SHARES OFFERED TO STOCKHOLDERS OF NUCLEAR FIRM:- Vitro Corp. of America has been offering 178,646 shares of common stock to its shareholders at \$16 a share on the basis of one new share for each five shares held of record April 2. Blyth & Co., Inc., New York, are underwriting the subscription which expires today, April 16th. Vitro will use the proceeds of \$2,858,336 from the sale for a \$930,000 laboratory at Silver Spring, Md., with \$1.1 million used to raise the capacity of its Canonsburg, Pa., plant which processes uranium, nickel, cobalt, and copper residues, and \$1.07 million to install new uranium solvent extraction process at Vitro's Salt Lake City unit. Additional monies will be applied to other projects of Vitro's \$7 million capital spending program planned for 1957.

URANIUM ISSUES SHOW STRENGTH:- Reflecting upward tendencies on the New York exchanges, many uranium issues on the Canadian exchanges reached year's highs in the last week. Consolidated Denison and Can-Met Explorations both reached new highs, with Gunnar mines somewhat stronger. Faraday and Northspan, with listings both in New York and Canada, showed strong buying activity. Easson's uranium index last week reached 385.4 for the year's high; this compares with 1957 low of 268.6 and 1956 low of 190.4.

ATOMIC ENERGY BUSINESS NEWS...

NEW ORGANIZATION BY UTILITY COMPANIES IN NUCLEAR FIELD:- Texas Atomic Energy Research Foundation is new organization established by eleven utility companies. W. A. Parish, president of Houston Light & Power Co., one of the founding companies, and president of the Foundation, said initial work would be on "fundamental methods involved" rather than on immediate applications. Other firms in the group are Central Power & Light; Community Public Service; Dallas Power & Light; El Paso Electric; Gulf States Utilities; Southwestern Gas & Electric; Southwestern Public Service; Texas Electric Service; Texas Power & Light; and West Texas Utilities Companies.

NUCLEAR POWER PLANT NEARS FINAL STAGES OF CONSTRUCTION:- Now nearing final stages of construction, the pressurized water reactor nuclear power plant at Shippingport, Pa., is expected to be completed and put through preliminary testing so that it will be generating electricity late this year, latest estimates show. Design capacity of the plant is 60,000-kilowatts; its electricity will be distributed over the Duquesne Light Company's system which services the greater Pittsburgh area. (Nuclear portion of the plant, on which major work is still to be done, is being financed by the USAEC and remains Government property. Duquesne Light, which will operate the plant, is building the conventional portion, providing the site and buildings, and contributing \$5 million toward research and development for the nuclear portion. Westinghouse Electric is building this nuclear portion for the USAEC, and contributing \$500,000 toward its cost, currently estimated at \$55 million.)

BRITISH-AMERICAN GROUP TO FURNISH W. GERMANY NUCLEAR POWER PLANT:- First nuclear power plant for W. Germany will be supplied by Mitchell Engineering, Ltd., and AMF Atomics, a UK-US nuclear combine. Boiling water reactor will be used, with slightly enriched uranium from the U.S. as fuel. Plant design capacity will be 15 megawatts of electricity. Firms will receive about \$5.3 million for their part of the work.

NUCLEAR RESEARCH CENTER TO BE BUILT:- Nuclear research center to study applications of radiation to petroleum technology will be built by Socony Mobil Oil on a 315-acre site the company recently bought near Princeton, N.J. The new center will be operated as a subdivision of Socony Mobil's research and development laboratory at Paulsboro, N.J. Facilities will include a 2 MEV Van de Graaff accelerator, a "hot" laboratory, and counting laboratories for assaying radioactive materials.

NUCLEAR COMPONENT MANUFACTURERS' NOTES:- New company to specialize in nuclear reactor core components, doing research and development work in metals, cermet, and ceramics, has been established at Exeter, Pa., by Samuel Storcheim. The new firm will be known as Metals Research & Development, Inc. .... Sale of a 1 MEV Van de Graaff accelerator to RCA Laboratories, division of Radio Corp. of America, has been made by High Voltage Engineering Corp., Burlington, Mass. RCA said it plans to use the machine to study radiation damage in such materials as semi-conductors and insulators, and in electronic devices. .... Brochure on radiation protection material for X-ray and radioisotope applications has been issued by Ameray Corp., Kenil, N.J. .... New catalog of nuclear instruments and other products is available from Nuclear-Chicago, 227 W. Erie St., Chicago 10, Ill.

PEOPLE...in nuclear work...

Marshall G. Holloway has been named president of the recently-consolidated Engineering and Research Corp., and nuclear energy products division of ACF Industries, Inc., New York.

William W. Lowe is now a partner in the atomic management and consulting firm of Pickard and Warren Associates, Washington.

Eger V. Murphree was appointed by President Eisenhower to be a member of the USAEC's General Advisory Committee, replacing Eugene P. Wigner, resigned.

John C. Clark, associate test division leader at Los Alamos Scientific Laboratory, has become staff assistant to J. R. Dempsey, manager of Convair-Astronautics. Dr. Clark has helped direct most of the USAEC's nuclear weapons tests since 1946.

Seven members-at-large have been elected to Regional Advisory Council on Nuclear Energy, new agency supported by 16 southern states to help promote nuclear developments in the region on an interstate basis: C. C. Murray (agriculture) Univ. of Georgia; Louis A. Pardue (education) Virginia Polytechnic Institute; Edwin A. Jones (industry) J. A. Jones Construction Co.; Edmond G. Boggs (labor) Richmond, Va.; James R. Maxfield, (medicine) Maxfield Clinic, Dallas; R. H. Mutcherson (public health) Nashville, Tenn.; George Kinsman (power) Florida Power & Light Co.



CONTRACTS AWARDED...in the nuclear field...

LABORATORY OPERATION:- Five year extension to its present contract for operation of Los Alamos Scientific Laboratory has been given University of California by USAEC. The extension, effective July 1, 1957, continues the University as Los Alamos contractor, work it has been doing continuously there since 1947.

NUCLEAR FUEL ELEMENT DEVELOPMENT & TESTS:- Fluor Corp., Los Angeles, has received research contract from USAEC to develop and test special nuclear fuels for a new type reactor. This reactor is one in which fluidized solid uranium, thorium and other particles flow by gravity through a graphite moderator and then a heat exchanger, accumulating at the bottom. Fuel would then be lifted to the reactor top again by conventional mechanical lift.

PHYSICAL RESEARCH STUDIES:- Bausch & Lomb research contract with USAEC, under which irradiation damage to glass is being studied, was one of a group of twelve physical research contracts recently renewed for another year by the USAEC. Eight new contracts for physical research were also let. N. J. Kreidl, of B&L, will do the research.

REACTOR FOR POWER PRODUCTION:- Contract signed by USAEC with Power Reactor Development Co. (PRDC), Detroit, provides for USAEC to assist company in development of \$47 million, 100,000-KW nuclear power plant at Laguna Beach, Mich. Government's contribution will be a 5-year waiver of fuel charges estimated at \$5 million, and \$4.45 million in research and development assistance. (Fast breeder reactor to be used in this plant will cost an estimated \$33 million. PRDC's plan is to sell steam from the reactor to Detroit Edison for generating electricity, and sell plutonium produced to the Government. PRDC vice-president E. R. Acker estimates that company receipts from these sales over a 10-year period will be \$43.466 million for steam and \$48.623 million for plutonium. Meanwhile PRDC received \$2 million last fortnight from pension trust funds supervised by 5 New York banks, under its agreement with them to borrow \$15 million total during a 2-year period. The loan, which is to be repaid by July 1, 1970, is guaranteed by the 13 electric companies which make up PRDC.

ACCELERATOR CONSTRUCTION:- Construction contract for high energy accelerator at U. S. Army's ionizing radiation center (Sharpe General Depot, Stockton, Calif.) has been awarded Varian Associates, Palo Alto, Calif., by Army Quartermaster Corps. Estimated contract price of machine is \$625,000; completion is planned for Oct. 31, 1958. (Accelerator will be used to investigate radiation in preserving foods, and radiation effects on leather, textiles and other materials.)

CONFERENCES, MEETINGS, SYMPOSIA...in nuclear energy field...

CONFERENCES:- Two day conference to review homogeneous nuclear reactor program will be held May 1-2, Oak Ridge National Laboratory, under sponsorship of USAEC. Conference at Northwestern University, Evanston, Ill., will be held Aug. 20-22, on Liquid Scintillation Counting. Further details from Technological Institute there.

MEETINGS:- Society of Nuclear Medicine will hold its fourth annual meeting June 20-23, Oklahoma City, Okla.

Third annual meeting of American Nuclear Society is scheduled for June 10-12, Pittsburgh, Pa. Details from W. W. Grigorief, Box 963, Oak Ridge, Tenn.

SYMPOSIA:- Session on nuclear and environmental studies will be included in Electronics Components Symposium being held May 1-3, Chicago. Further details from Radio-Electronic-Television Manufacturers' Assoc., Washington, D. C.

Radiation Research Society will hold symposium on radiation genetics May 15-15, Rochester, N.Y. Details from A. Edelmann, P.O. Box 10901, Pittsburgh 36, Pa.

NUCLEAR WEAPONS NEWS...

UNITED STATES:- Tests of new nuclear explosive devices will be made by the USAEC at its Nevada test site starting about May 15th and continuing through the Summer. The Commission said "low yield" nuclear explosions would be involved, referring to controlled fall-out. In addition to detonation tests, the USAEC will experiment with safe handling in an attempt to standardize such procedures.

SOVIET UNION:- Nuclear detonations at Soviet proving grounds occurred April 3, 6 and 10, according to indications from ground monitoring stations, and from upper air examinations. These are the most recent tests of the current series, which began November, 1956.

RAW MATERIALS...prospecting, mining, marketing...

UNITED STATES:- Drilling program of Rare Metals Corp. in Ambrosia Lake area marks initial operations of this subsidiary of El Paso Natural Gas Co. in Grants, N.M. section. Rare Metals also operates uranium processing mill at Tuba City, Ariz. .... Also at the Ambrosia Lake area, a 2.8 million ton uranium ore body has been discovered and proved by Phillips Petroleum Co. on its wholly-owned 1,280-acre mining lease there, the firm recently reported. Phillips said the uranium ore was "above-average grade".... July 20 has been set by U. S. department of Interior as date for opening 98,976 acres of land in southwestern Colorado to staking of uranium mining claims. Of this total, 3,760 acres are privately owned; federally owned mineral deposits on these private lands make them subject to mining locations along with 95,216 acres of public land being restored to public entry. Restored lands are in Montrose and San Miguel counties, near Nucla and Naturita, and had been reserved since 1948 for use of the USAEC. The USAEC office at Grand Junction, Colo., will make public on July 20 uranium exploration data obtained by the USAEC in preliminary appraisals of the public domain lands involved in this restoration. (Land entry by veterans and others with special preference rights becomes effective April 20.)

CANADA:- Lorado Uranium Mines has put into operation the crushing and grinding section of its custom uranium mill in the Beaverlodge area, Saskatchewan; this was less than a year from start of construction. First units of this mill started Mar. 17. It is anticipated operating the mill at not less than 750-tons per day through to 1962; the company holds contract to supply Eldorado Mining & Refining with \$64,480,000 of uranium concentrates..... It is reliably reported that Faraday Uranium Mines and Greyhawk Uranium Mines have reached agreement on combining of their activities. Faraday holds Eldorado contract for delivery of \$30,754,800 in uranium concentrates; Greyhawk's Eldorado contract is for \$20,350,050 (currently in letter of intent). Under terms of the agreement, it is understood Faraday will mill ore from Greyhawk's property on a custom basis; this would provide larger revenue to Faraday while relieving Greyhawk from raising finances to install its own mill..... Target date of July 1, 1957 has been set as start-up date at Can-Met Explorations' property in the Blind River area, Northern Ontario, an official of the company has stated. Extensive plant construction and mine development are underway at the property of this company which holds Eldorado contract for delivery of \$75,852,000 in uranium concentrates.

JAPAN:- Pilot plant of Atomic Fuel Public Corp. is expected to go into experimental production of uranium metal shortly. Company states it has spent nearly \$2.5 million on this pilot plant, which will be prototype of unit with initial annual capacity of three tons of uranium metal. (Komatsu Manufacturing Co. also reports that it will develop uranium mineral deposits known to exist in Thailand, where scientists from the U. K. are at present carrying out technical investigations of the value of the deposits.)

NEW BOOKS & OTHER PUBLICATIONS...on nuclear energy subjects...

Proceedings of Seventh National Conference on Standards. Includes full discussion of nuclear standardization. --American Standards Assoc., 70 E. 45th St., New York 17 (\$4.00).

Trilinear Chart of Nuclides; 2nd edition. (First edition was in 1949.) Compiled by W. H. Sullivan, Oak Ridge National Laboratory. --Sup't. of Documents, Wash. 25, D.C. (\$2.00).

Publications Available to Public; List No. 16. Issued by U. K. Atomic Energy Authority; compiled by library at Harwell. --UKAEA, St. Giles Ct., London, Eng. (n.c.)

Isotope Index; second edition. U.S., Canadian, British, French and German sources of commercially available isotopes. --Scientific Equipment Co., 23 N. Hawthorne Lane, Indianapolis 19, Ind. (\$2.50).

Atomic Energy Legislation Through 84th Congress. Prepared by Gov. Printing Office for use of Joint Congressional Committee on Atomic Energy (JCAE). 166 pages. --JCAE, Wash. 25, D.C. (45¢).

Sincerely,

The Staff,  
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